UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/047,223	01/15/2002	Anthony Walter Harty	SJO920010113US1	5751

7590 11/03/2004	EXAMINER
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ART UNIT	PAPER NUMBER
2124	

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/047,223	HARTY ET AL.
	Examiner	Art Unit	
	Qamrun Nahar	2124	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>15 January 2002</u>.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-26</u> is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) <u>1-26</u> is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on <u>15 January 2002</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
    1.☐ Certified copies of the priority documents have been received.
    2.☐ Certified copies of the priority documents have been received in Application No. _____.
    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
       application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date <u>1/15/02</u>.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____ .

DETAILED ACTION

1. Claims 1-26 have been examined.

Claim Objections

2.   Claim 1 is objected to because of the following informalities: replace "also" on line 7 of

the claim with "further". Appropriate correction is required.

3.   Claim 19 is objected to because of the following informalities: "The method of claim

11" on line 1 of the claim should be "The **apparatus** of claim 11". Appropriate correction is

required.

Claim Rejections - 35 USC § 112

4.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
> subject matter which the applicant regards as his invention.

5.   Claims 17 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite

for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention.

6.   Claim 17 recites the limitation "the list of events" in line 1 of the claim. There is

insufficient antecedent basis for this limitation in the claim. Therefore, this limitation is

interpreted as "the plurality of the records of events".

7.   Claim 17 recites the limitation "the list of events" in line 2 of the claim. There is

insufficient antecedent basis for this limitation in the claim. Therefore, this limitation is

interpreted as "the common record of events".

8.   Claim 20 recites the limitation "the list of events" in line 8 of the claim. There is

insufficient antecedent basis for this limitation in the claim. Therefore, this limitation is

interpreted as "the common record of events".

Claim Rejections - 35 USC § 102

9.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10.   Claims 1-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Colligan (U.S.

6,405,329).

Per Claim 1:

The Colligan patent discloses:

- **an apparatus for tracking errors in an embedded system** ("The embodiments of the present

disclosure advantageously provide an improved method of correlating the storage device to a

computer system and correlating recent operating characteristics with the time and date of the behavior. In addition, the present embodiments provide an improved method and apparatus for a tracking a given alleged failed HDD upon return to the factory for repair and error analysis." in column 2, lines 24-31)

- **a plurality of buffers** ("Interface 32 routes information to and from the at least one computer readable medium 34. Still further, interface 32 can include an embedded controller with suitable firmware for logging characteristic operational information, as discussed herein. At least one non-volatile buffer is located in a reserved area of the at least one computer readable medium 34. For example, the at least one buffer may include an error buffer 40, a timestamp benchmark buffer 42, an installation ID buffer 44, and a snapshot buffer 46. The reserved area of the computer readable media of the disk drive is not a standard or normal user data area of the disk drive." in column 3, lines 28-39)

- **and a tracing module communicating with the plurality of buffers, the tracing module configured to make a record of events occurring during operation of a segment of program code which are useful for finding and correcting errors, the tracing module further configured to selectively transmit the record of events to the plurality of buffers** ("Referring now to FIG. 4, an exemplary error buffer 40 is illustrated. The buffer 40 includes error type information entries 60 and corresponding POH entries 62. Error buffer 40 is updated upon an occurrence of prescribed errors or corrective action events implemented by the disk drive. As illustrated in FIG. 4, a first read error (RE) occurred at a POH of twenty-two (22) hours, as

indicated by reference numeral 64. A second read error occurred at a POH of twenty-six (26)

hours." in column 3, lines 65-67 to column 4, lines 1-6).

Per Claim 2:

The Colligan patent discloses:

- wherein each buffer in the plurality of buffers is configured to store records of a different

type of event (column 3, lines 28-39).

Per Claim 3:

The Colligan patent discloses:

- wherein the different types of events comprise errors, warnings, and messages (column 3,

lines 28-39).

Per Claim 4:

The Colligan patent discloses:

- wherein the plurality of buffers are each assigned to a different functional component of

the program code (column 3, lines 28-39).

Per Claim 5:

The Colligan patent discloses:

- further comprising a merging module configured to combine the records of events stored in the plurality of buffers into a common list of events (column 7, lines 24-32).

Per Claim 6:

The Colligan patent discloses:

- wherein the common list of events is in chronological order (column 7, lines 24-32).

Per Claim 7:

The Colligan patent discloses:

- wherein the tracing module is configured to timestamp each record of an event that is stored in the buffers (column 7, lines 65-67).

Per Claim 8:

The Colligan patent discloses:

- wherein the merging module is configured to selectively combine the records of events (column 7, lines 24-32).

Per Claim 9:

The Colligan patent discloses:

- wherein each record of an event is stored together with information about the event

(column 3, lines 65-67 to column 4, lines 1-6).

Per Claim 10:

The Colligan patent discloses:

- wherein the information about the event comprises the type of event (column 3, lines 65-67

to column 4, lines 1-6).

Per Claim 11:

This is another version of the claimed apparatus discussed above (claims 1, 2, 5, 6 and 7-

9), wherein all claim limitations also have been addressed and/or covered in cited areas as set

forth above. Thus, accordingly, this claim is also anticipated by Colligan.

Per Claims 12-16, 17 (as best understood) & 18:

These are method versions of the claimed apparatus discussed above (claims 1-7,

respectively), wherein all claim limitations also have been addressed and/or covered in cited

areas as set forth above. Thus, accordingly, these claims are also anticipated by Colligan.

Per Claim 19:

This is another version of the claimed apparatus discussed above, claim 9, wherein all

claim limitations also have been addressed and/or covered in cited areas as set forth above.

Thus, accordingly, this claim is also anticipated by Colligan.

Per Claim 20 (as best understood):

This is a method version of the claimed apparatus discussed above (claims 1, 5 and 6),

wherein all claim limitations also have been addressed and/or covered in cited areas as set forth

above. Thus, accordingly, this claim is also anticipated by Colligan.

Per Claim 21:

This is a method version of the claimed apparatus discussed above (claims 1, 2 and 3),

wherein all claim limitations also have been addressed and/or covered in cited areas as set forth

above. Thus, accordingly, this claim is also anticipated by Colligan.

Per Claim 22:

This is a computer system version of the claimed apparatus discussed above (claims 1

and 7), wherein all claim limitations also have been addressed and/or covered in cited areas as

set forth above. Thus, accordingly, this claim is also anticipated by Colligan.

Per Claim 23:

This is a computer system version of the claimed apparatus discussed above (claims 2, 5, 6 and 9), wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, this claim is also anticipated by Colligan.

Per Claim 24:

This is a computer system version of the claimed apparatus discussed above (claims 2 and 3), wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, this claim is also anticipated by Colligan.

Per Claim 25:

This is a computer system version of the claimed apparatus discussed above, claim 4, wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, this claim is also anticipated by Colligan.

Per Claim 26:

This is an embedded system version of the claimed apparatus discussed above (claims 1, 2 and 3), wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, this claim is also anticipated by Colligan.

Conclusion

11.   Any inquiry concerning this communication from the examiner should be directed to Qamrun Nahar whose telephone number is (571) 272-3730. The examiner can normally be

reached on Mondays through Thursdays from 8:30 AM to 6:00 PM. The examiner can also be

reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Kakali Chaki, can be reached on (571) 272-3719. The fax phone number for the

organization where this application or processing is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is (703) 305-3900.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

QN
October 29, 2004

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